



SUBMARINE ATTACK

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U-BOAT MASTER!

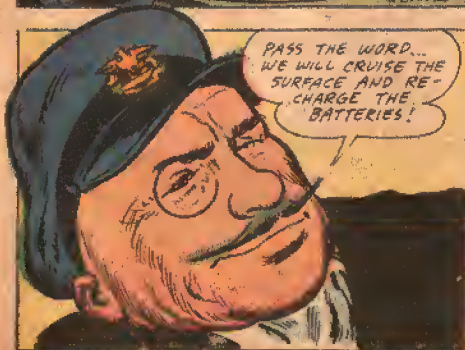
YOU YANKEES SHOULD'VE STAYED AT HOME! NONE OF YOU WILL REACH FRANCE TO FIGHT OUR KAISER! THE VATERLANDS ARMIES WILL TAKE PARIS YET! I, HANS KRAAGER, WILL SINK YOUR SHIPS! HA, HA!

IT WAS 1917... THE UNITED STATES HAD ENTERED THE WAR AND MEN AND ARMS WERE STREAMING ACROSS THE ATLANTIC! BUT, STRADDLING THE CONVOY ROUTES, THE U-BOAT PACKS LAY WAITING... COMMANDED BY SUCH MEN AS OBERLEFTEANT HANS KRAAGER, MASTER OF WAR BENEATH THE SEA!

OBERLEFTEANT KRAAGER WAS ONE OF THE MOST DARING AND SUCCESSFUL U-BOAT COMMANDERS!

PASS THE WORD... WE WILL CRUISE THE SURFACE AND RE-CHARGE THE BATTERIES!

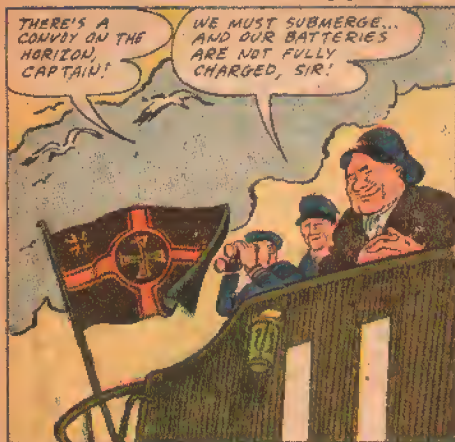
WE'LL GET YOU, DUTCHMAN!



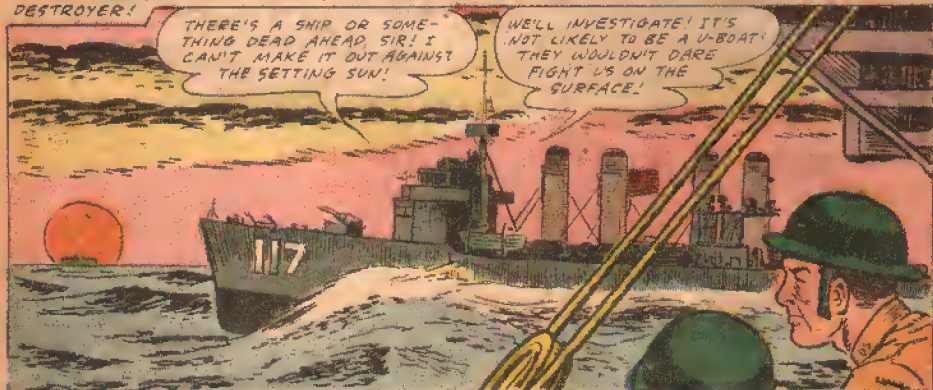
GILL GLANZ

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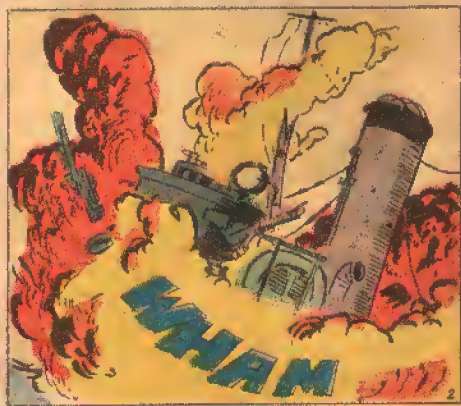
SUBMARINE ATTACK



THE ARROGANT RUDE WAS TYPICAL OF THE U-BOAT COMMANDER! SON OF AN OLD JUNKER FAMILY, HE BELIEVED IN GERMAN MIGHT, NOTHING ELSE! BUT OUT FROM THE CONVOY STEAMED A DESTROYER!



A HIT IN HER POWDER MAGAZINE, CRACKS THE DESTROYER WIDE OPEN...

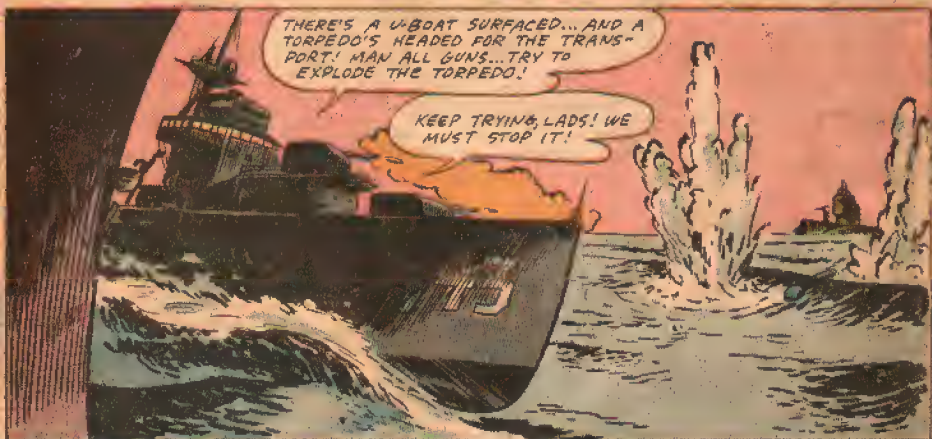


SUBMARINE ATTACK

KRAAGER'S BRILLIANT STRATEGEM PAID OFF! THE OTHER ESCORTING DESTROYERS WERE ON THE OTHER SIDE OF THE CONVOY! KRAAGER'S U-BOAT REMAINED SURFACED WHILE HE PICKED TARGETS! THE FIRST WAS A TANKER...

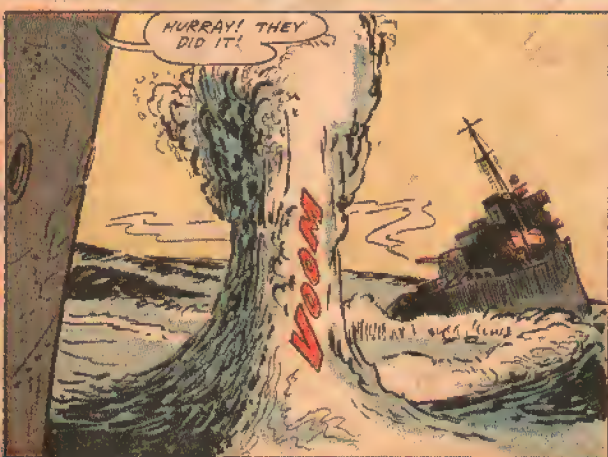


NOW THAT TRANSPORT --- TRY FOR THE ENGINE ROOM!



THERE'S A U-BOAT SURFACED... AND A TORPEDO'S HEADED FOR THE TRANSPORT! MAN ALL GUNS... TRY TO EXPLODE THE TORPEDO!

KEEP TRYING, LADS! WE MUST STOP IT!



MURRAY! THEY DID IT!



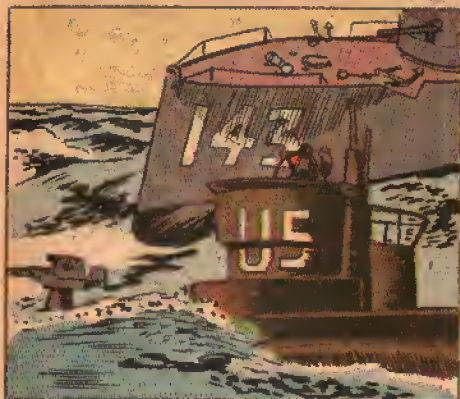
WHEN THE DESTROYER'S GUNS EXPLODED THE MISSILE, KRAAGER GROANED!

WHAT FANTASTIC LUCK!

WE MUST DIVE, CAPTAIN! THEY'RE COMING AFTER US!

SUBMARINE ATTACK

KRAAGER, RAGING, TOOK HIS U-BOAT DOWN...
BUT HIS RAGING COST HIM PRECIOUS SECONDS!



SUBMARINE ATTACK

BUT THE DESTROYER'S ALERT CAPTAIN SIGHTED THE TWIN TRACKS OF DOOM....

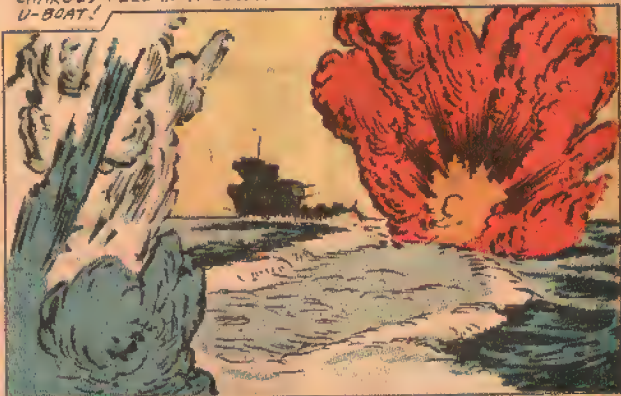
HARD TO PORT!
ALL ENGINES
FULL AHEAD!



EMERGENCY DIVE
PROCEDURE! THE
DESTROYER IS
TRYING TO
RAM!



THE DESTROYER DIDN'T SUCCEED IN RAMMING... BUT HER DEPTH CHARGES FELL IN A LETHAL PATTERN AROUND AND ON THE U-BOAT!



THE U-BOAT IS DESTROYED.
SIR! THIS TIME THERE'S
NO TRICK... SHE'S
CRACKED WIDE
OPEN!



THAT WAS THE END OF OBERLEFTENANT HANS KRAAGER, U-BOAT MASTER... AND HIS SUBMARINE IS STILL THERE TODAY... KRAAGER IN COMMAND!



End

A DAY OF 'FUN WITH POP'

SGT. JONES RECENTLY RETURNED HOME AFTER HAVING SERVED HIS ENLISTMENT IN THE ARMY... USES ARMY TECHNIQUES TO TAKE HIS KIDS ON A TRIP...



THE DAY STARTS OFF WITH REVEILLE -- EVERY BODY UP...



INSPECTION...

LET'S SEE, WASHED YOUR NECK AND EARS CLEAN... BRUSHED YOUR TEETH, COMBED YOUR HAIR!

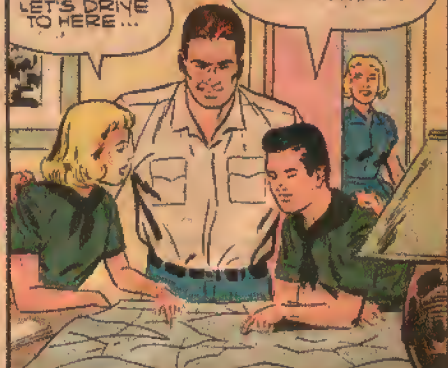
YES, SIR!



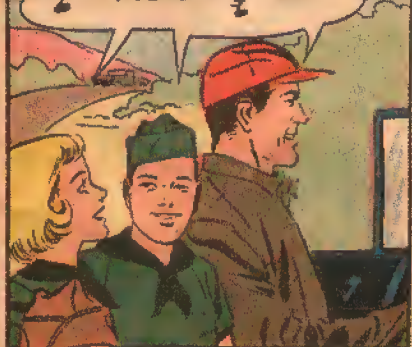
PLANNING THE TRIP...

LET'S DRIVE TO HERE...

...AND HIKE UP THIS MOUNTAIN!



MERRILY WE ROLL ALONG... ROLL ALONG... ROLL ALONG...



BOY, ISN'T IT BEAUTIFUL? WE SHOULD DO THIS MORE OFTEN!



YES, KIDS... YOUR POP IS YOUR PAL... ENJOY LIFE WITH HIM; HE'S A GREAT GUY... GO OUT AND HAVE FUN WITH POP!

THIS IS PRESENTED AS A CHARLTON PUBLIC SERVICE



SUICIDE DIVE

THIS IS THE NAUTILUS, THE FIRST ATOMIC POWERED SUBMARINE! THIS FINE SHIP, REPRESENTING THE GREATEST ADVANCE IN NAVY UNDERWATER CRAFT, IS CRUISING SUBMERGED THROUGH THE ARCTIC WATERS ON HER HISTORIC FIRST EXTENDED CRUISE! HER CREW ARE, FOR THE MOST PART, VETERAN SUBMARINERS! WHAT DO THEY THINK OF THIS SHIP? HOW DOES SHE COMPARE WITH OTHER, OLDER TYPE SHIPS THEY SERVED IN?



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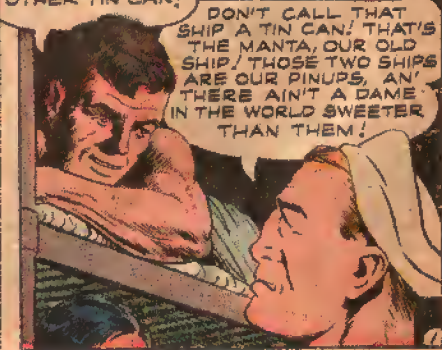
BOY, THIS IS SOME SHIP, EH, WIFE? PLENTY OF ROOM, QUIET, RUNNIN' LIKE SLICK GREASE! WHAT A SHIP TO FIGHT FROM, EH?

YEAH! NOT MUCH LIKE THE OLD MANTA!



HEY, JAKE, WHAT'S THIS STUFF ABOUT THE MANTA? AND HOW COME, WHEN EVERYBODY ELSE HAS PINUPS ABOVE THEIR BUNKS, YOU'VE GOT PHOTOS OF THE NAUTILUS AN' THAT OTHER TIN CAN?

DON'T CALL THAT SHIP A TIN CAN! THAT'S THE MANTA, OUR OLD SHIP! THOSE TWO SHIPS ARE OUR PINUPS, AN' THERE AIN'T A DAME IN THE WORLD SWEETER THAN THEM!



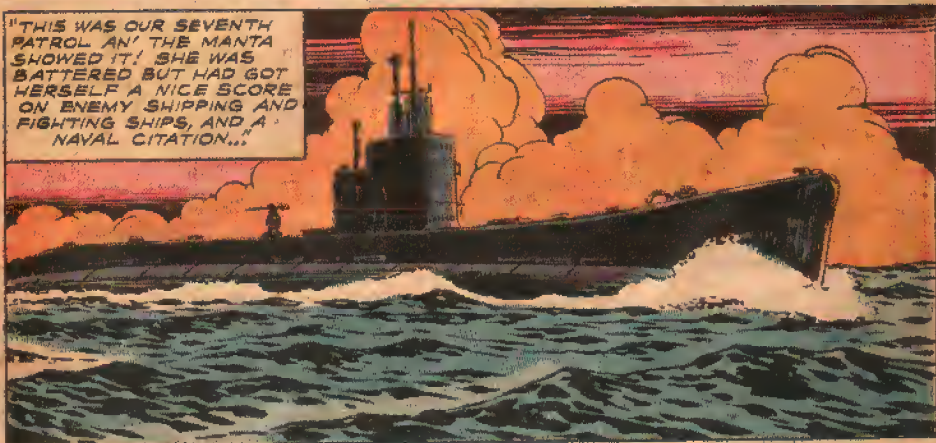
SUBMARINE ATTACK

WHAT'S SO TERRIFIC ABOUT THAT MANTA SHIP? CRIPES, SHE CAN'T COMPARE TO THIS SHIP!

MAYBE NOT! THEN AGAIN... MAYBE YES! Y'KNOW A GUY NEVER FORGETS HIS FIRST LOVE, AN' THE MANTA WAS MINE... AN' THE FIRST LOVE OF EVERY MAN ABOARD HER!

LET ME TELL YOU ABOUT THE OLD MANTA, IT WAS DURING THE WAR! WE SAILED OUT ON CHRISTMAS DAY, 1943! WE WERE HEADED FOR THE ENEMY CONVOY ROUTE BETWEEN GUAM AND TRUK...

"THIS WAS OUR SEVENTH PATROL AN' THE MANTA SHOWED IT! SHE WAS BATTERED BUT HAD GOT HERSELF A NICE SCORE ON ENEMY SHIPPING AND FIGHTING SHIPS, AND A NAVAL CITATION..."



"OUR SKIPPER WAS CAPTAIN 'BLAST' SKINNER AND THE MANTA WAS HOME TO HIM!"

"THREE HOURS LATER OUR RADAR PICKED UP ITS FIRST BEEP... A JAP CONVOY!"

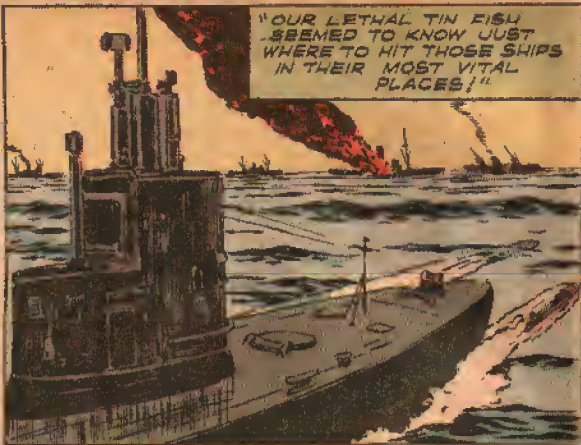
MUST BE AN IMPORTANT CONVOY, SHE'S VERY HEAVILY ESCORTED! DOWN PERISCOPE WE'RE GOING IN!

WE'RE ENTERING ENEMY WATERS! RIG FOR DIVING! AYE, AYE, SIR!



SUBMARINE ATTACK

"WE TRACKED THE CONVOY,
GOT OUR FIXES ON THE
NOSE AND BLASTED THAT
CONVOY TO KINGDOM
COME!"



SIX BIG
DESTROYERS
COMING AT
US! DOWN
PERISCOPE!
ONE!



"THOSE DESTROYERS, ALL SIX OF
THEM, RINGED AROUND OUR
POSITION AND STARTED
HEAVING DEPTH CHARGES!"



"AND THE MANTA
TOOK THE WORST
BATTERING SHE'D
EVER BEFORE TAKEN!"

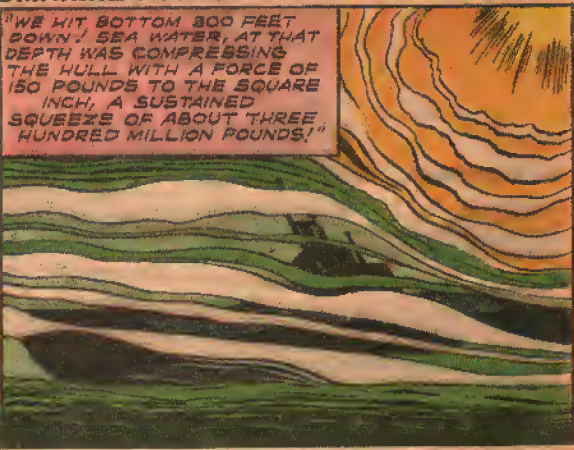


SUBMARINE ATTACK

COMPARTMENTS SEVEN AND TEN SMASHED! I SEALED THEM OFF! PLATES AND PIPES ALL LEAKING! ENGINES FLOODED AND WE'RE SINKING FAST!



"WE HIT BOTTOM 300 FEET DOWN! SEA WATER, AT THAT DEPTH WAS COMPRESSING THE HULL WITH A FORCE OF 150 POUNDS TO THE SQUARE INCH, A SUSTAINED SQUEEZE OF ABOUT THREE HUNDRED MILLION POUNDS!"



"CONCUSSION FROM THE DEPTH CHARGES WAS TERRIFIC! WE BAILED THE MOTOR AND TORPEDO ROOMS FOR OVER FOURTEEN HOURS!"



"THEN CAME THE WAITING, THE AWFUL WAITING! THE TEMPERATURE SLID UP TO 135 DEGREE!"

I... I CAN'T BREATHE... I'M SUFFOCATING... CHOKING... TAKE IT EASY, KID! GET HOLD OF YOURSELF!



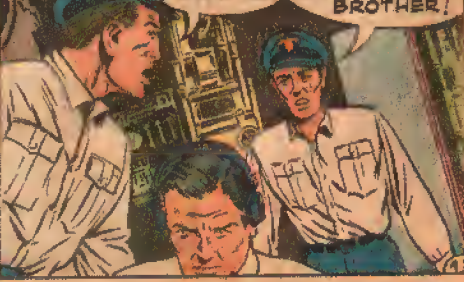
MASSEY, SEND UP SOME PIECES OF CORK AND SOME OIL SLICK! MAYBE THEY'LL THINK THEY'VE GOT US AND GO AWAY! WE CAN'T STAY DOWN MUCH LONGER OUR PRESSURE GAUGE IS TOO LOW! GOT TO CHARGE THE BATTERIES... IF WE CAN GET HER UP!



"THE AIR HAD BECOME FOUL! BREATHING WAS A TORTURE, WE HAD ALMOST RUN OUT OF OXYGEN AND BATTERY CHARGE!"

THEY'RE MOVING OFF, SIR! THE TRICK WORKED, THEY MUST THINK THEY SUNK US!

ALL RIGHT! NOW LET'S SEE IF WE CAN RAISE HER! IF WE CAN'T... THAT'S ALL BROTHER!



SUBMARINE ATTACK

"THE MANTA STRAINED UNDER HER STUTTERING MOTORS..." AND WE STRAINED WITH HER, PRAYING, THEN, SLOWLY, SHE BEGAN TO INCH UPWARD..."



YUP, WE SWEATED IT OUT AND FINALLY THE OLD MANTA SURFACED! MOST OF US NEVER THOUGHT SHE'D MAKE IT! BUT SHE DID AND WE LIMPED HOME AND SHE WAS REPAIRED AND TOOK TO SEA AGAIN!



I KNOW HOW A SHIP CAN TAKE ON PERSONALITY AND CHARACTER TO HER CREW AND OFFICERS! BUT SHUCKS, YOU CAN'T COMPARE ONE OF THOSE SUBS TO THE NAUTILUS!



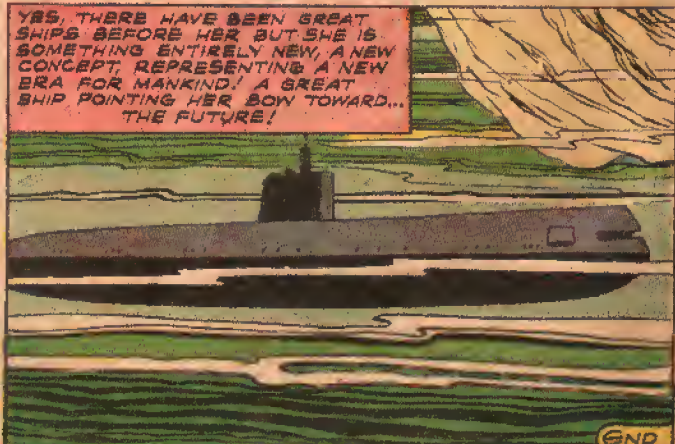
HEY, I JUST HAPPENED TO THINK...WE'VE BEEN RUNNING SUBMERGED FOR AN AWFUL LONG WHILE!



HA! I FORGOT! WE DON'T HAVE TO DEPEND ON BATTERIES AND SUCH FOR POWER! WE'RE RUNNING ON ATOMIC POWER! SERVING IN A SUB THAT HAS JUST ABOUT UNLIMITED POWER! GREAT SHIP ALL RIGHT!



YES, THERE HAVE BEEN GREAT SHIPS BEFORE HER BUT SHE IS SOMETHING ENTIRELY NEW, A NEW CONCEPT, REPRESENTING A NEW ERA FOR MANKIND! A GREAT SHIP POINTING HER BOW TOWARD... THE FUTURE!



END

SUBMARINE ATTACK

The SILENT STALKER!

THIS WAS THE SHARKFIN'S FIRST PATROL! NEW SUBMARINE, NEW CREW, NEW CAPTAIN... AND CRUISING IN ENEMY WATERS! SHE HAD LEFT DARWIN, AUSTRALIA THREE WEEKS BEFORE AND AS YET HAD FOUND NO PREY... PERHAPS LUCKILY SO! FOR SHE WASN'T A SMOOTH SHIP, NOR DID THE CREW WORK SMOOTHLY, A DEADLY COMBINATION FOR THE U.S. SUB SERVICE DURING THIS TIME OF ALL OUT WAR!



CAPTAIN FARNOL WENT TO HIS CABIN AND MADE AN ENTRY IN HIS LOG!

*A mistake or a lapse in timing alone
a submarine can be the
difference between life
and death! That is what
bothers me for the crew does
not work well together!*

*For I think that the crew
full confidence in their ship
on their captain, since both
are new to them and the ship
has developed from a huddle
that one side between also, crew
and officers develop quickly
we will do in for a hot
and dangerous voyage!*



SUBMARINE ATTACK

CHECKED THE PERISCOPE, SIR!
YOU ASKED ME TO REPORT
WHEN VISIBILITY HAD
DECREASED!

ALL RIGHT,
BRIGGS, TAKE
HER UP FOR
SURFACE
PATROL!

THE INSTANT THE SHARKFIN BROKE WATER A RADAR WATCH
WAS ESTABLISHED! TWO ENGINES WERE PUT ON BATTERY
CHARGE AND ONE ON PROPULSION AT LEISURELY SPEED!
THE CREW SETTLED DOWN TO THE ALERT WATCHFULNESS
OF NIGHT SURFACE OPERATIONS!

I TELL YOU PETE, WE'RE
ON A JINX SHIP! ALL
THESE THINGS GOIN'
WRONG!

WELL, IT'S NOT BEEN ANY-
THING REALLY BIG! JUST
LITTLE THINGS THAT
GRIDE YOU -

THEN THE WORDS RANG OUT THAT ALWAYS
BRINGS THE SUBMARINER TO INSTANT
ANTICIPATORY ATTENTION!

RADAR CONTACT!

MAN TRACKING STATIONS!
CHECK COURSE! PLOT!

THE BLEEPS
SHOW A
GROUPING,
SIR! MARK!

THE SHARKFIN SETS ITS COURSE AND SPEEDS TO HEAD ITS

CHECK THE TDC!
STAND BY TO SUBMERGE!
UP PERISCOPE!

SUBMARINE ATTACK



SUBMARINE ATTACK

ABOVE THE ENEMY DESTROYERS STEAM FORWARD...AND IN THE SHARKFIN THE ORDERS ARE A DESPAIRING "TAKE HER DOWN!"



THE DEPTH CHARGE ATTACK ROCKS THE SHARKFIN AS SHE SINKS DOWNWARD!



SHE AIN'T BUILT TO TAKE THIS! AIN'T BUILT FOR ANYTHING! EVERYTHING GOES WRONG ABOARD THIS BLASTED SHIP!



BUT SHE RODE OUT THE DEPTH CHARGE ATTACK! ABOVE, THE DESTROYERS FINALLY MOVED OUT OF RANGE!



I THINK WE'RE SAFE! TAKE HER UP TO.

RADAR CONTACT I'M GETTING A PECULIAR BEEP, SIR! I DON'T THINK IT'S SURFACE...

OUT OF THE GREEN-BLACK DEPTHS AN ENEMY SUB STALKED, AND SWUNG TOWARD THE SHARKFIN!



ENEMY SUB, SIR! IT FEELS AS THOUGH WE'RE BAD HIT!

CHECK DAMAGE! LET HER SINK DOWN AS THOUGH WE'VE NO CONTROLS!



SUBMARINE ATTACK

LIKE A MONSTER OF THE DEEP THE ENEMY SUB CIRCLED THE DOWNWARD PLUNGING SHARKFIN! THEN, SATISFIED THAT SHE WOULD NEVER RISE, IT SLID AWAY!



ENEMY SUB GONE, SIR!

TAKE HER UP... IF SHE CAN GO UP! WE MUST CHECK AND PATCH HER AS BEST WE CAN IMMEDIATELY!



ON THE NIGHT SURFACE REPAIRS BEGAN! MEANWHILE THE CAPTAIN CHECKED HIS CHARTS!

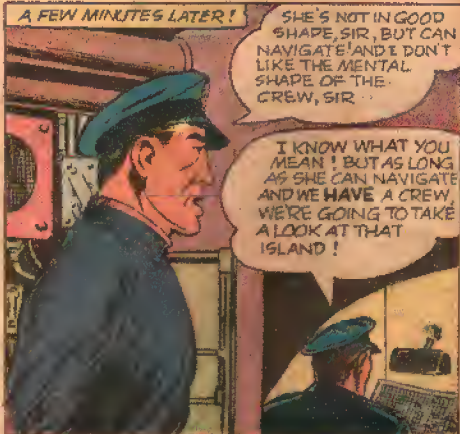
A SUB DOESN'T GENERALLY ATTACK ANOTHER SUB! THERE MUST BE A REASON! PERHAPS IT'S THIS SMALL ISLAND CLOSE BY WITH THE NATURAL BAY! BRIGGS, SEE HOW THE REPAIRS ARE GOING! I'D LIKE TO TAKE A LOOK AT THAT ISLAND!



A FEW MINUTES LATER!

SHE'S NOT IN GOOD SHAPE, SIR, BUT CAN NAVIGATE! AND I DON'T LIKE THE MENTAL SHAPE OF THE CREW, SIR!

I KNOW WHAT YOU MEAN! BUT AS LONG AS SHE CAN NAVIGATE AND WE HAVE A CREW, WE'RE GOING TO TAKE A LOOK AT THAT ISLAND!



THE SHARKFIN LIMPED TOWARD THE ISLAND! THEN,

SUBMERGED TO PERISCOPE DEPTH THE CAPTAIN HAD HIS LOOK!



THERE'S A HEAVY MERCHANT SHIP JUST GOING IN! THERE'S PROBABLY A NET AND MINES AT THE ENTRANCE WHICH WILL OPEN FOR THE MERCHANT SHIP! SO WE'RE GOING IN WITH HER! STICK AS CLOSE TO HER BOTTOM AS A BARNACLE!



SUBMARINE ATTACK

IT WAS A DANGEROUS TRY! BUT THE SHARKFIN'S BAD LUCK SEEMED TO HAVE ALL RUN OUT AND ... SHE MADE IT!



FIRE ONE!
AND PRAY IT'S
NOT A DUD!



IT WASN'T A DUD! THE SHARKFIN WREAKED HAVOC IN THE SMALL BAY, ITS TORPEDOES SMASHING THE ENEMY CONVOY!



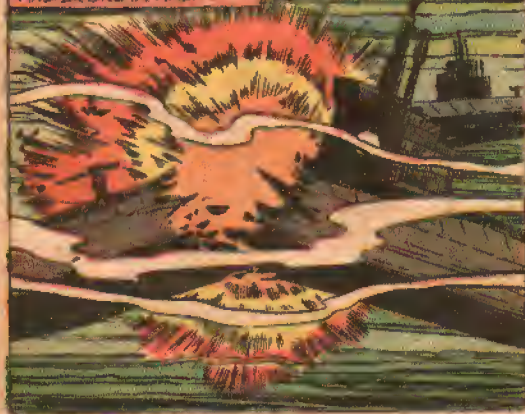
THEN, AS A DESTROYER FRANTICALLY SOUGHT OPEN WATER FOR MANEUVERABILITY, THE SHARKFIN FOLLOWED BENEATH HER, GETTING OUT THE SAME WAY SHE GOT IN!

WE'RE CLEAR, SIR!
AND I'M PICKING UP
THAT SAME STRANGE
SUB DEEP AGAIN...

BEARING...
MARK! IT'S
THE SAME
SUB WE MET
BEFORE!
SET! FIRE!

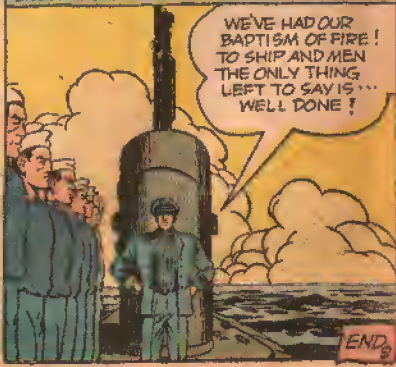


THE ENEMY SUB WAS TAKEN AMIDSHIPS
AND BROKE IN HALF ...



THE SHARKFIN LIMPED HOME FOR REPAIRS!
BUT SHE WAS A DIFFERENT SHIP WITH A
DIFFERENT CREW ... A CREW WHO LOVED
THEIR SHIP AND SKIPPER, A UNIT, SHIP
CREW AND OFFICERS A FIGHTING ONENESS.

WE'VE HAD OUR
BAPTISM OF FIRE!
TO SHIP AND MEN
THE ONLY THING
LEFT TO SAY IS ...
WELL DONE!

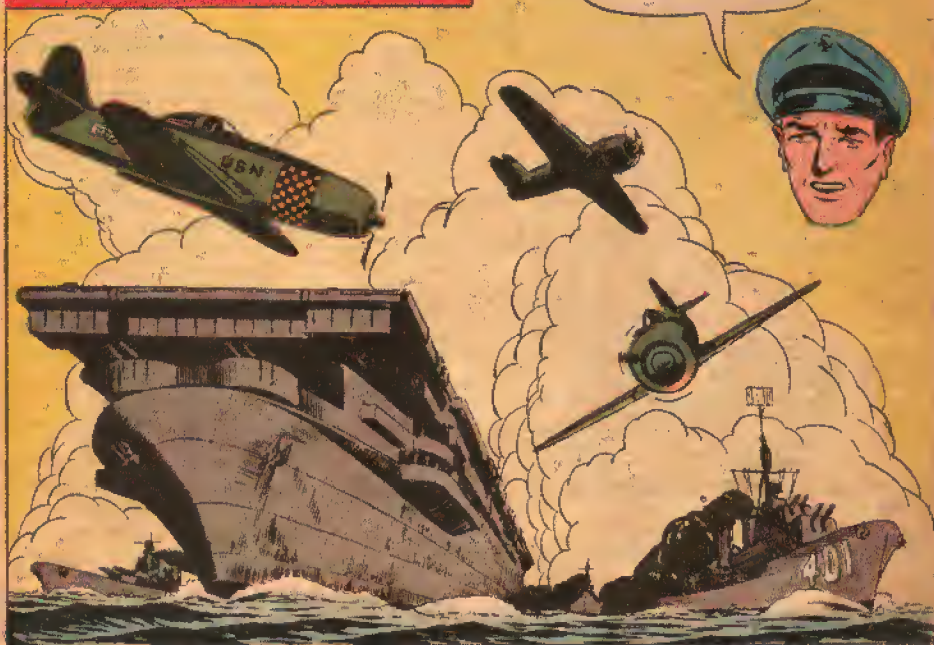


END

SUBMARINE ATTACK

TASK FORCE

WORLD WAR II SAW THE MOST POWERFUL TASK FORCES IN HISTORY STALK THE PACIFIC IN RELENTLESS SEARCH AND PURSUIT OF THE ENEMY! WHAT IS A TASK FORCE? THERE WERE THE CARRIERS, OF COURSE, WITH THEIR HUNDREDS OF PLANES! AND DESTROYERS! AND CRUISERS! AND BATTLESHIPS! BUT, BEHIND THEM, THERE WERE OTHERS...



BEHIND THE COMBAT VESSELS WERE OTHERS EQUALLY IMPORTANT! THE TANKERS REFUELED THE CARRIERS AND DESTROYERS AT SEA! THE DESTROYER TENDER CARRIED AMMO AND TORPEDOES! THE TENDERS ALSO HAVE COMPLETE MACHINE SHOPS ABOARD! THE MINESWEEPERS ARE ALWAYS NEEDED! THE SUPPLY SHIPS ARE JUST AS IMPORTANT! IN THIS OUTFIT AS THE COMBAT SHIPS!



MINESWEEPER



SUPPLY SHIP



OILER



DESTROYER TENDER

Armed Forces Advancements

Constantly our armed forces are searching for new inventions, new ideas, and new techniques that will enable them to be better prepared both for war and for missions of peace. The items which you will read are not classified as "confidential-strategic" and hence can be released to the public.

The day of the Atompowered airplane may not be here yet, but it's right around that next corner. As the world's first aircraft to fly with an operating atomic reaction aboard, the B-36 intercontinental bomber, NB-36H, has been carrying out research leading to the development of a true atompowered airplane.

In tests high over the Southwestern United States, effects of radiation upon instruments, equipment and the NB-36H's airframe are measured by the "hot" reaction which, although taken along for the ride, has not yet been used to power the flight. Methods of shielding the crew, reactor operators and electronic devices from radioactivity are tested, and new types of nuclear instrumentation are checked out.

The plane's dark blue nose differs sharply from that of a conventional B-36 and the huge vertical tail carries an orange radiation symbol that distinguishes this aircraft from all others. Airscoops on the fuselage aft of the wing cool the reactor when it is operating. The low-powered reactor is never turned on until the plane is high over an unpopulated area and then only long enough to obtain the necessary data for test purposes.

Six bottles of air captured by Signal Corps scientists from the borderline of outer space-only existing samples of pure air from very high altitudes-are expected to help solve basic mysteries in rocketry and geophysics. The samples were collected 75 miles up by steel bottles inside the nose cones of two 20-foot Navy AEIOBEC rockets. As the rockets reached peak altitude, the bottles popped open one at a time, then snapped shut to trap eight quarts each of the very thin air. The nose cones were then parachuted to earth.

The captured air is so thin that it would not support life. Compressed to the density of normal breathing air, the 48 quarts would take up less than one cubic inch. A human being or animal living at earth level would literally burst from internal body pressure if sealed up in a room filled with such thin air. Complete analysis of the samples will take several months. But Signal Corps scientists expect to

prove whether common gases begin separating into layers at high altitudes.

A device that locates Arctic crevasses-camouflaged "canyons" which can consume men, equipment, and supplies, has been developed by Army Engineers. The unit creates an electromagnetic field which is distorted by the presence of a crevasse. Basically, the device consists of four "electrodes" placed at approximately 20-foot intervals. Its motive power is a Weasel, an over-snow vehicle that carries special electronic equipment, moves three electrodes in the form of disk-shaped sleds about four square feet in size, and acts as an electrode itself.

The search head is pushed ahead of the Weasel. The other sleds are towed behind. The rearmost sleds combine to create the electromagnetic field. Power is provided by a generator. In operation, the driver keeps a watchful eye on a special recorder as the Weasel moves over the ice. As long as the meter stays steady, it means the terrain is uniform. When the search head reaches a crevasse, the difference in the air in the crevasse and the surrounding area causes a noticeable change in the recording. The alarm is distinct when the Weasel is about 10 feet from the danger point.

Since the vehicle travels only about three-to-five miles an hour, this is sufficient warning. The detector located all known crevasses and some new ones during tests covering more than 100 miles of the Greenland Ice Cap last summer. A detector made from Army Engineer drawings has also been used by Task Force 43 operating in the Atlantic.

A giant solar furnace that can concentrate the sun's rays to produce temperatures comparable to those of an atomic explosion is to be erected at Natick, Mass., by the Army. Designed to test materials intended for protection against the thermal effects of nuclear weapons, the furnace is expected to reduce the time and cost of development. A solar furnace collects the sun's rays and directs them into a small target area just as a magnifying glass produces a hot-point focus.

Present standard sources of intense heat, such as high current electric arcs, gas-fired panels and burning magnesium are not adequate for present day experiments. Consisting of four elements occupying an area 125 feet by 40 feet, the sun furnace has an automatic positioning device keeping the system aimed directly at the sun at all times. At one end

of the assembly is a tremendous mirror which receives the sun's rays and reflects them to another bank of mirrors. The rays are channeled into a chamber, in a four inch beam where articles can be exposed to heat.

A new artillery projectile made of paper and water has been developed by the Army to provide an inexpensive shell for test firing. Made at present only for the 105mm howitzer, the new shell costs about \$1.00. This compares with the \$10.00 costs of the conventional metal projectile. Its weight and resistance to the expansion of the propellant gasses make it possible to test operation of the howitzer's recoil system.

The 105mm howitzer, using this shell, may be fired where the range is only a matter of a hundred feet or so, for the muzzle blasts forth only water and bits of paper. The shell consists of two wax-impregnated, kraft paper tubes. These are four inches in diameter and 42 inches long and resemble elongated ice cream containers. The ends of the tubes are sealed with three one-eighth inch cardboard disks.

The projectiles are filled with water through a three-quarter inch hole in the forward end which is then enclosed with a cork. The new type of projectile is filled with water just before firing and then loaded into the gun's muzzle instead of the breech. Standard rounds are loaded into the breech. The water spray from the projectile is harmless, but the cardboard end closures may damage targets at a distance of 75 feet. At 125 feet there is almost complete safety against flying particles of cardboard.

Transparent rubber is being tested by the Air Force as a way to beat the heat on airplane windshields. The rubber will be used as an interlayer in the windshield glass of new supersonic aircraft. With this new material airplane windshields will be able to withstand twice as much heat from air friction at high speeds.

Since airplanes have surpassed the speed of sound, surface temperatures have greatly increased. Frictional heat can reach such intensity

that the flexible, transparent plastic now used as windshield layer softens and begins to lose strength. When its strength is gone, the interlayer is unable to prevent the glass from shattering if cracked.

The new rubber interlayer retains adequate strength up to 350 degrees Fahrenheit as compared to the 180 degree Fahrenheit limit on present plastic interlayers. At the other end of the temperature scale, the new interlayer retains its shatter-resistance properties at the sub-zero temperature of 65 degrees Fahrenheit, whereas the present interlayer becomes brittle and possesses no shatter resistance at that temperature.

The rubber interlayer is a bit cloudier than the plastic material. And up to 160 degrees Fahrenheit it has less shatter-resistance. However, strength of the plastic interlayer falls off so sharply that at 200 degrees Fahrenheit the rubber interlayer is already more than twice as effective.

A Jeep mounted detector which automatically stops the vehicle when it locates a mine has been developed by the Army Engineer Corps. Capable of finding mines buried in and along roadways, the detector covers a path of six feet wide directly in front of the jeep and can be moved to both sides of the vehicle with ease. Operating controls, located on the dashboard of the jeep, can be manipulated by either the driver or his assistant.

The search coil, protected by an immersion-proof rubber coated plywood box, is kept at a constant height above the ground by three skid-caster type wheels which support its carriage assembly. When the search coil passes over a mine, the jeep is stopped instantly by the brake actuator, which disengages the clutch and sets the brake. A meter, mounted on the indicator panel indicates the presence of the mine. A system of lights, also located on the panel, changes from green to red and a signal is received through earphones by the driver.

Next time we meet again, I'll have some more advances made by our armed forces to tell you.

— THE END —



SUBMARINE ATTACK

SHAKEDOWN CRUISE

THE SKIPPER, COMMANDER MARSH, DIDN'T LIKE IT! HE WAS TAKING OUT THE COPPERFIN, NUCLEAR POWERED SISTER SHIP TO THE NAUTILUS AND SEAWOLF, AN ATOMIC ATTACK SUB! HE DIDN'T LIKE HAVING A CIVILIAN ABOARD ON THIS SHAKEDOWN CRUISE, AND HE WASN'T COMPLETELY SOLD ON THE NAVY'S SO-CALLED FISSION FLEET!



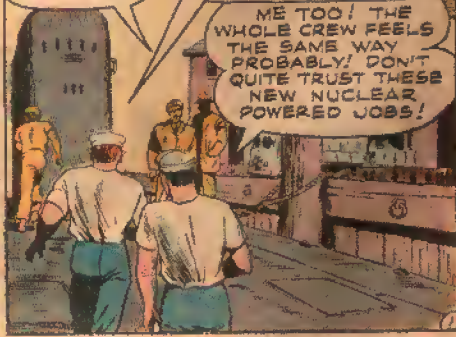
GET A LOAD OF THE SKIPPER! HIS FACE IS LIKE A THUNDERCLOUD!

I SHOULDN'T WONDER! FROM WHAT THE ADMIRAL SAID THIS CIVILIAN IS PRACTICALLY THE CAPTAIN! WHO IS THAT GUY ANYWAY?

CAST OFF! MR. COLTER, STEP DOWN TO MY QUARTERS PLEASE, SIR!

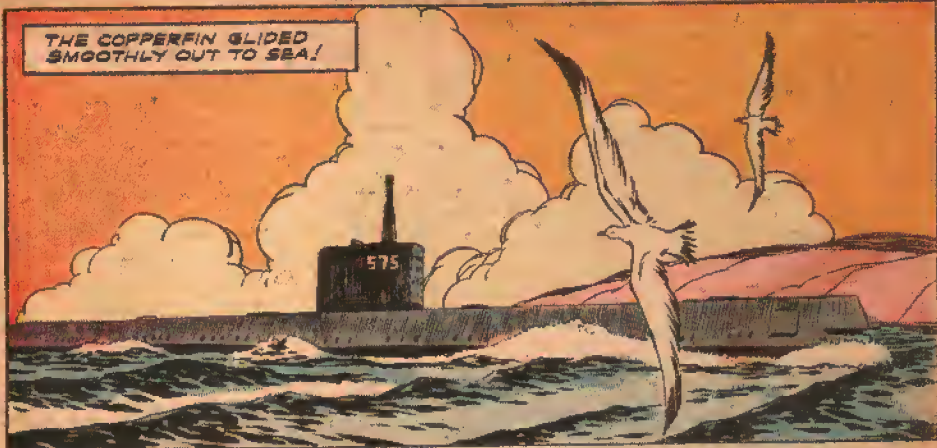
THE SKIPPER DON'T LIKE THESE NEW ATOMIC SUBS, I DON'T THINK! BET HE'S WISHIN' HE WAS MOVIN' OUT IN OUR OLD SUB! I DO TOO!

ME TOO! THE WHOLE CREW FEELS THE SAME WAY - PROBABLY! DON'T QUITE TRUST THESE NEW NUCLEAR POWERED JOBS!

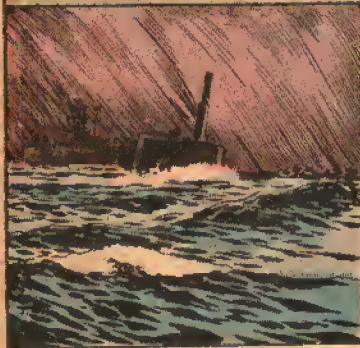


SUBMARINE ATTACK

THE COPPERFIN GLIDED SMOOTHLY OUT TO SEA!

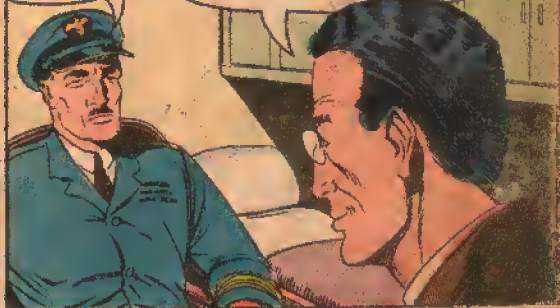


SHE WAS 267 FEET LONG AND DISPLACED 2,190 TONS! NUCLEAR POWERED SHE WAS SELF SUFFICIENT AND COULD CRUISE INDEFINITELY!



NOW, MR. COLTER, JUST WHAT IS YOUR PURPOSE ABOARD?

WHY COMMANDER I'M JUST ALONG FOR THE RIDE. I'M VERY MUCH INTERESTED IN NUCLEAR POWERED UNDERWATER CRAFT! AS YOU KNOW YOU HAVE MANY NEW INSTRUMENTS IN THE COPPERFIN...



I'M AWARE OF THAT, SOME OF THEM SEEM QUITE USELESS TO ME!

AH, NO, CAPTAIN! WE MUST NEVER CONDEMN UNTIL WE HAVE THOROUGHLY TESTED!



YOU'LL EXCUSE ME COMMANDER, I'M ANXIOUS TO SEE HOW EVERYTHING IS GOING!

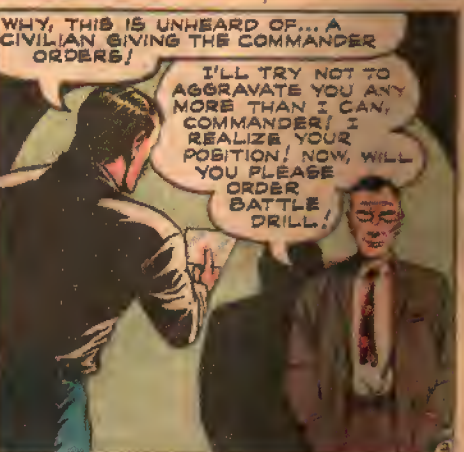
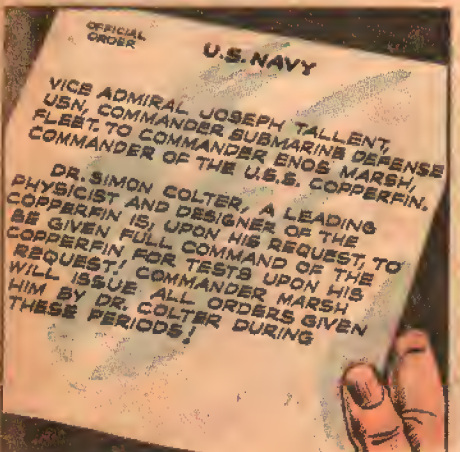
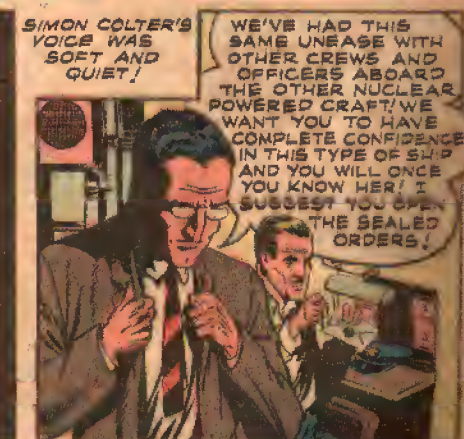
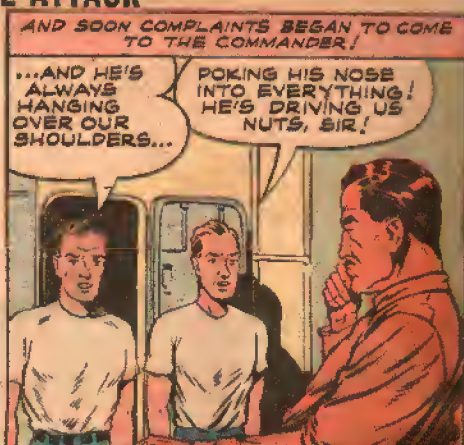
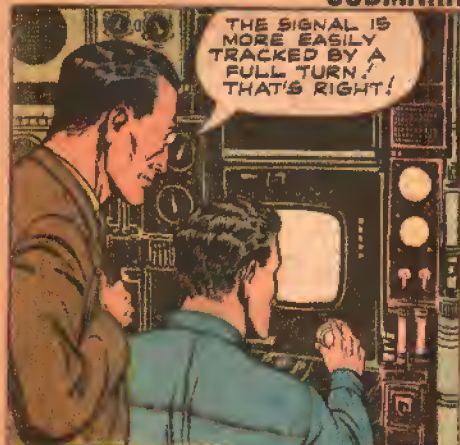


SIMON COLTER WANDERED THROUGH THE SHIP PEERING HERE AND THERE...

ER, PARDON ME! PULL THE LEVER ALL THE WAY DOWN! THE MECHANISM IS DESIGNED FOR MAXIMUM STRESS AND OPERATES MORE EFFICIENTLY THAT WAY!



SUBMARINE ATTACK



SUBMARINE ATTACK

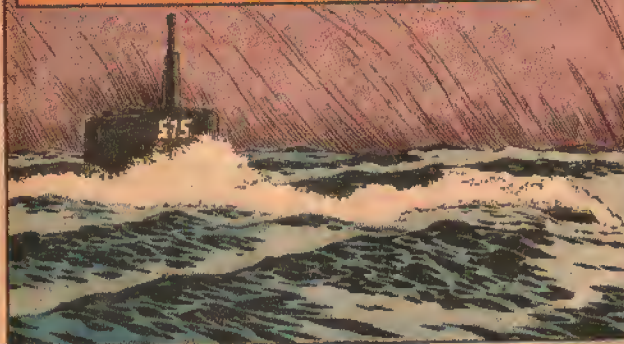
PUMING THE CAPTAIN GAVE HIS ORDERS!
THE ALERT SIREN SOUNDED THROUGHOUT
THE SHIP!



THE CIVILIAN SCIENTIST MURMURED HIS
REQUESTS, AND THE CAPTAIN SHOUTED
THEM ANGRILY IN ACCEPTED NAVY JARGON!



THE COPPERFIN DIVED AND RAN SUBMERGED
WHILE MR. COLTER HUSTLED THROUGHOUT
THE SHIP, MAKING A THOROUGH NUISANCE
OF HIMSELF!



HOURS PASSED!

I DON'T LIKE THIS! WE
NEVER STAYED DOWN AS
LONG AS THIS IN OUR
OTHER SHIPS IF WE
DIDN'T HAVE TO!



TAKE HER DOWN
250 FEET
COMMANDER
AND OPEN HER
UP TO TOP
SPEED!

BUT...THE PRESSURE'S
TERRIFIC AT THAT
DEPTH! AND THERE
ARE MUD AND CORAL
BANKS IN THIS
WATER!

I DON'T LIKE TO REMIND
YOU OF YOUR ORDERS,
COMMANDER! PLEASE, DO
AS I REQUEST! THE
COPPERFIN CAN TAKE
MUCH MORE PRESSURE
THAN THAT!



SUBMARINE ATTACK

SUDDENLY THE COPPERFIN STRUCK!

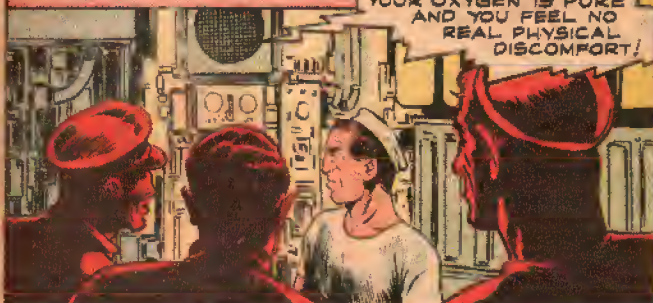


WHAT NOW, MR. COLTER? WE'RE STUCK FAST IN A MUD BANK 250 FT. BELOW!

WHY WE JUST SIT HERE FOR AWHILE!



HOURS PASSED! FEAR BEGAN TO CREEP THROUGH THE SHIP! SUDDENLY A VOICE CAME OVER THE LOUDSPEAKERS, THE VOICE OF SIMON COLTER, ADDRESSING THE OFFICERS AND THE MEN!



GENTLEMEN, THE PURPOSE OF ALL THIS IS TO DEMONSTRATE HOW FINE A CRAFT THE COPPERFIN IS, SO YOU WILL HAVE COMPLETE CONFIDENCE IN HER! YOUR OXYGEN IS PURE AND YOU FEEL NO REAL PHYSICAL DISCOMFORT!

WE COULD STAY DOWN HERE INDEFINITELY WITHOUT HAVING TO SURFACE TO RECHARGE BATTERIES SINCE WE ARE NUCLEAR POWERED! THE OLD STYLE SUB WOULD HAVE TROUBLE PULLING OUT OF THIS MUD BANK! BUT IN A MINUTE THE REVERSE ENGINES WILL BEGIN AND YOU WILL SEE HOW EASILY WE PULL OUT!



THE COPPERFIN EASILY PULLED FREE OF THE UNDERWATER BANK AND SURFACED!



AND THAT NIGHT, AT DINNER, AT THE COMMANDER'S TABLE...

I GIVE YOU DR. SIMON COLTER, DESIGNER OF THIS FINE SHIP! NOW THAT WE KNOW WHAT SHE CAN DO, I KNOW I SPEAK FOR MY MEN AND OFFICERS AS WELL AS MYSELF WHEN I SAY, THERE NEVER'S BEEN A SHIP AS FINE AS OUR COPPERFIN! THANK YOU FOR HER, DR. COLTER!



END

4. Средства массовой информации (СМИ) – это каналы, по которым информация распространяется на массовую аудиторию. К ним относятся:

SUBMARINE ATTACK

THE PACIFIC WAR EMPHASIZED THE NEED FOR DELIVERING THE FIGHTING MEN ON A HOSTILE BEACH, READY TO FIGHT! MORE THAN 75,000 SUCH SHIPS AND BOATS WERE IN USE BY THE NAVY BY THE END OF THE WAR! THE BIGGEST, THE LST (LANDING SHIP, TANK) WAS 327 FT. LONG WITH A TUNNEL-LIKE HOLD FOR CARRYING TANKS, VEHICLES AND MISCELLANEOUS CARGO!

LANDING Craft



WHEN THE LST HIT THE BEACH, THE BOWS OPENED WIDE AND A RAMP CAME OUT! MANY GI'S AND MARINES WHO WERE LANDED ON HOSTILE BEACHES NEVER GOT THEIR FEET WET..



SOME LST'S WERE EVEN CONVERTED INTO JUNIOR FLAT TOPS FROM WHICH PIPER CUBS LANDED AND TOOK OFF, USED AS ARTILLERY OBSERVATION PLANES..



SUBMARINE ATTACK

THE LSM (LANDING SHIP, MEDIUM) WAS 203 FT. LONG, AND FASTER THAN THE CLUMSIER LST!

SKILLFULLY DESIGNED, SHE QUARTERS HER CREW AND OPERATING EQUIPMENT IN SIDE HOUSING, THUS LEAVING THE MAJOR DISPLACEMENT FOR HER CARGOES OF MEN AND WAR MATERIALS. AN LSM CARRIES A DOZEN TANKS, VEHICLES OR EQUIVALENT CARGO -



THE LCI (LANDING CRAFT, INFANTRY), CARRIED 200 COMBAT-EQUIPPED TROOPS ABOARD! THE 153 FT OCEAN-GOING CRAFT HAD RAMPS ON EACH SIDE OF THE BOW DOWN WHICH THE GI'S SCRAMBLED WHEN SHE HIT THE BEACH!



THERE WERE OTHER TYPES--THE LCM (LANDING CRAFT, MECHANIZED) WAS CARRIED ON THE ATTACK TRANSPORTS UNTIL THE POINT OF HOSTILITIES WAS REACHED! THEY WENT IN CARRYING A MEDIUM TANK OR 120 MEN! THEY WERE FIFTY FEET LONG, POWERED BY TWO DIESEL ENGINES...



THE SMALLEST OF THEM ALL, THE WORKHORSE OF THE INVASIONS, WAS THE LCVP (LANDING CRAFT, VEHICLES AND PERSONNEL)! THIS BABY CARRIED THE MEN INTO EVERY BEACH WE HIT IN THE PACIFIC! THEY HAD A CAPACITY OF 30 MEN, ONE VEHICLE, OR FIVE TONS OF CARGO...



40

FOREIGN AND
AMERICAN CARS\$7
ONLY

Each Car Marked Clearly With Its Own Name!

AN AMAZING TOY BARGAIN!

NOW, with these perfectly styled motor cars, you can give any child of any age a world of pleasure at an unbelievably low price! Please don't confuse them with adult bubble toys. These are 3-dimensional, substantial models—you can even bounce them without breaking—set to go in brilliant colors, beautifully finished right down to the wheels, no assembling necessary. Each car is clearly marked with its own name—and what names they are! Jaguar, Cadillac, Mercedes, MG—the most sports and town cars that kids dream about. They'll have fun for hours, and you'll have fun showing them around. Perfect for playing make-believe, these show-stopping models, running models. Never before \$7.10 brings you such real play value! Absolutely gift packaged. Please order today for quick delivery!

Special Note: Send only \$3.50 for each collection of 40 cars. Add 25c for postage and handling for each set.

MAIL TODAY FOR PROMPT DELIVERY!

MODEL CARS, Dept. 350

114 E. 32 Street, New York 16, N. Y.

Gentlemen:

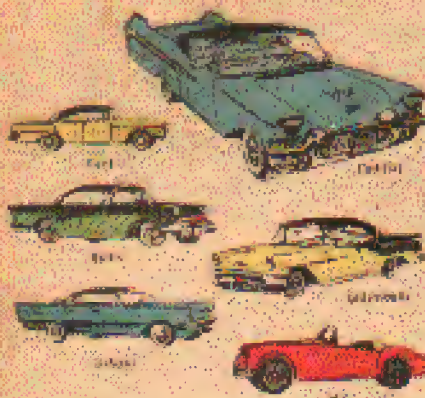
I don't wish to see if these model cars are all you say they are. Enclosed please find \$3.50 to start a 40-car collection, with \$1.00 for each set of MODEL CARS each at \$1 and 25c for postage and handling per set of 40 cars. I will send them back to you if they are not what I said. I will send them back to you for refund or per your guarantee. (Name, No. C.O.D.)

Name _____

Address _____

City _____ State _____

Zip _____

All these, and more, designed
WORLD FAMOUS SPORT CARS!

- | | | | |
|----------|------------|-------------|--------------|
| • Ford | • MG | • Fiat | • Corvair |
| • Jaguar | • Cadillac | • Mercedes | • Volkswagen |
| • Buick | • Plymouth | • Chevrolet | • Pontiac |
| • Ford | • Ford | • Ford | • Ford |
| • Ford | • Ford | • Ford | • Ford |

MONEY BACK GUARANTEE

GAG CARDS

EACH GAG CARD IS
A CARLOAD OF LAUGHS
AND ONLY A LITTLE OVER A PINT EACH

Share fun with friends, relatives, family, school, church or business associates. This card set is filled with 72 cards and signs. Includes 101 gagtable situations! Each is covered by the fun, quick facts with these cards and signs. Particularly when the card is shown in the photo.

72 DIFFERENT CARDS \$1

PLUS 10 TYPING SIGNS

Includes 101 gagtable situations. This card set is filled with 72 cards and signs. Includes 101 gagtable situations! Each is covered by the fun, quick facts with these cards and signs. Particularly when the card is shown in the photo.

GAG CARDS - 234 JEROME AVE. - N.Y.C. 16

THINK

BACK IN 5 MINUTES

QUALITY AT A PRICE!

PLAN AHEAD

DO IT TODAY!

PLEASE, NO SMOKING

QUIET! GENIUS AT WORK

QUIET! GENIUS AT WORK

LOOK KIDS! Big Powerful MAGIC MAGNIFIER

for your very own!
IT'S FREE!
JUST MAIL COUPON



**MAGNIFIER
SENT ABSOLUTELY
FREE!**



MAIL COUPON BELOW! FIND OUT HOW WE GIVE YOU MANY WONDERFUL PREMIUMS or CASH

MAGIC MAGNIFIER COMES TO YOU FREE ACT NOW!

MAGIC MAGNIFIER HELPS
BETTY & BOB
FIND THE JEWEL MYSTERY
CLUB AND WIN CASH



THIS MAP SHOWS A TREASURE HIDE-OUT AND LOOK! THE MYSTERY CLUB!



WHAT IS SECRET HIDE-OUT FOR ALL THE SMALL PREMIUMS I HAVE BEEN SELLING TO MY FRIENDS AND NEIGHBORS?



For FREE Magnifier, Big Catalog and Guide to Treasure
for your very own! Search for treasure and win cash and prizes!
Send back this coupon to: Wilson Chemical Co., Dept. 717, P.O. Box 1000, Jersey, Pa.
Name _____ Address _____
City _____ State _____ Zip _____
Age _____ Sex _____
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.
I am _____ years old.

When I receive this coupon, I will send you a FREE Magnifier, Big Catalog and Guide to Treasure for your very own! Search for treasure and win cash and prizes!
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